Location: Fire St	•			Log # 239	
(1) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				Job / PO # 9846	257
SAMPLE #:1 SOURCE: Mortar		LAR#: 23961:1 SAMPLE LO	CATION: Chim	ι ε γ, west sid e	
No Asbesto	os Detected				
		номо	GENEOUS		
Asbestos	Asbestos %	non-asbestos fibers	% other fibers	nonfibrous components	nonfibrous %
			F	iller & Binder	100
	Des	scription: Tan coarse ch	nunk		
Note:		•			

CLAYTON ENVIRONMENTAL

MAY-18-1999 10:58

P.02/02

206 763 4189 Attention: Joe Lacrek



Clayton Environmental Consultants

LABFAX

Log #19791 ANALYZED BY Crystal Wright

Job / PO #91031014

ON 5/14/97

Client: City of Seattle, D.A.S.

cation: Firestation #39

LABS: SAMPLE LOCATION: Old boller opening, interior pipe

SOURCE : Insulation

SAMPLE #:1

Asbestos	Asbestos	%	non-asbestos fibers	% other fibers	nonfibrous components	nonfibrous
			Cellulose	2	Vermiculite	71
					Non-Fibrous Tremolite	2
					Filler & Binder	25
		Des	cription: Brown mic	aceous powd	lery material	1

ş	(Care	-		F.	1/	200	Ö
	M	ΑY	Year.	4	41	99	1

TIES M & 0

Post-It* Fax Note	7671	Date # of pages ▶
		From
70 Dec		Co.
Co./Dept.		Phone #
Phone #	030	Fax #
Fax # 386 9	محر	

PRELIMINARY REI	PORT							
Laboratory Data Sheet	is for lab	use and	faxing only.	The final	report will	follow in	the	mail.
Verified by:								

4636 E. Marginal Way S. Suite 215 Seattle, WA 98134 (206) 763-7364 Fax (206) 763-4189



April 16, 1997

Mr. Joe Zdenek City of Seattle-DAS Facilities Management 610 3rd Ave. Basement Level Seattle, Washington 98104

RE: Background Air Monitoring for Asbestos Firestation #39 Clayton Project #75-97281.00

Dear Mr. Zdenek

Per your request, Clayton Environmental Consultants conducted ambient air sampling to characterize background levels of asbestos at Firestation #39 on April 4, 1997.

The samples were collected on 25 millimeter mixed cellulose ester filters (≤0.8 um pore) then analyzed using Phase Contrast Microscopy (PCM) in accordance with the NIOSH 7400 method. Samples were collected according to WAC-296-62-07735, Appendix A-WISHA reference method.

Results of air monitoring showed that airborne levels of asbestos in the living quarters, and the hose tower did not exceed the E.P.A. recommended level of 0.010 fibers per cubic centimeter of air (0.010 f/cc) recommended for safe public occupancy. Attached are the results from our Clayton lab in Seattle.

If you have any questions regarding this project or require any additional information, please feel free to call me at (206) 763-7364.

Sincerely,

Clayton Environmental Consultants

Rich Carlson

Industrial Hygiene Technician

RC/A97 Attachments

Clayton ENVIRONMENTAL CONSULTANTS

AIR SAMPLE DATA

AN AIHA ACCREDITED LABORATORY #414 Log # T8446

Log " 104

Project # 75-97281.00.000 Samples: 4

formerly HAZCON
4636 E. Marginal Way So. Suite 215
Seattle, WA 98134
(206) 763-7364

Number of Samples:

PO #:

Client: City of Seattle

Job Location: Fire Station #39

Abatement Firm:

SAMPLE# CN191	DATE: 4/4/97	LOCATION: Living Quarters	s, weight room
Area PUMP# HF004	CONTROLS: N/A N/A N/A	OBSERVATIONS: Background	
PRIORITY: Regular	NAME:	SS#	CERT#
TIME	FLOW RATE (LPM) VOLUME	Fibers/	Fiber Concentration
	Start: 12.00 Avg= Liters=	Fields Fibers/	Fibers/ *FIBERS/
	End: 12.00 12.00 1116	$8 / 100 \frac{mm^2}{10.2}$	Filter 3,924 CC:
Method: NIOSH 7400, Ar	rules (Issue #2, 8/15/94)	Limit of Detection: 5	2,000
Footnote: F5-Fibers greater	than 5µm in length.		
	1	1	
SAMPLE # CN270	DATE: 4/4/97	LOCATION: Hose Tower, 3rd	d deck
SAMPLE TYPE	CONTROLS:		
Area	N/A	OBSERVATIONS: Background	sampling
	N/A		
PUMP# HF007	N/A		
PRIORITY: Regular	NAME:	SS#	CERT#
TIME	FLOW RATE (LPM) VOLUME	Fibers/	Fiber Concentration
Start: 08:59 Total	Start: 12.00 Avg= Liters=	Fields Fibers/	Fibers/ *FIBERS/
End: 10:35 96 I	End: 12.00 12.00 1152	4 / 100 mm²	Filter CC:
Mathada NYOSYY 7400 A		5.1	2,000
Method: NIOSH 7400, A r		Limit of Detection: 5	2,000 (()
Footnote: F5-Fibers greater	than 5µm in length.		
SAMPLE # CK075	DATE: 4/4/97	LOCATION: Blank	
SAMPLE TYPE	CONTROLS:	LOCATION. Blank	
Plant	N/A	OBSERVATIONS:	
Blank	N/A	OBSERVATIONS:	
	N/A		
PUMP#			
PRIORITY: Regular	NAME:	SS#	CERT#
TIME Start: Total	FLOW RATE (LPM) VOLUME Avg= Liters=	Fibers/ Fibers/	Fiber Concentration
ouit.	Start: Avg= Liters= End:	0 / 100 mm ²	Fibers/ *FIBERS/ Filter CC:
Elid:	siu.	0 / 100 < 5.0 <	2.000
Method: NIOSH 7400, Ar	ules (Issue #2, 8/15/94)	Limit of Detection: 5	2,000
Footnote: F1-Actual value o	f client blank; the results have been blank corre		
Microscope field area (mm²):	0.00785	ID	
		Detection Limits of Blank Corrected F	·
Filter size (mm): 25	Effective Filter Area (mm²): 385	Blank 1: CK075 Blank 2:	CK085
Control slide: 93-36	Result (f/mm²) 62.4	Blank Average: 0 / 100	_
Completely District		<u> </u>	
Sampled by: Rich Carls			ultants
Received by: Rich Carls	- · ·	1/97	/
Microscopist: Rich Carls	Date Analyzed: 4/4	1/97 Checked by W	
Samples are collected and analyzed	according to NIOSII 7400 (Issue 8/15/94) and	or State/OSIIA Reference Methods via	Phase Contrast Microscope (PCM) by

Samples are collected and analyzed according to NIOSII 7400 (Issue 8/15/94) and/or State/OSIIA Reference Methods via Phase Contrast Microscope (PCM) by NIOSII 582 trained, PAT or AIIIA Registry participating analysts. Flow calibration is performed before and after sampling with calibrated rotameters. We are ponsible only for our own work and cannot verify the accuracy of air sampling data supplied by customers or of sampling not supervised or observed by ayton Environmental Consultants professionals.

Intralaboratory Sr: (6.4 - 25.5 fibers/100 fields) 0.43; (25.6 -63.7 fibers/100 fields) 0.38; (63.8 -127.4 fibers/100 fields) 0.29; (>127.4 fibers/100 fields) 0.53 Interlaboratory Sr: 0.40

^{*}Fibers per cubic centimeter of air

ENVIRONMENTAL CONSULTANTS

AIR SAMPLE DATA

AN AIHA ACCREDITED **LABORATORY #414** Log# T8446

Project # 75-97281.00.000 4

Number of Samples:

formerly HAZCON 4636 E. Marginal Way So. Suite 215 Seattle, WA 98134 (206) 763-7364 Client: City of Seattle

Job Location: Fire Station #39

Abatement Firm:

PO #:

SAMPLE#		DA	TE:4/4/97		LOCATION: B	lank		
SAMPLE TYP	'E		CONTROLS:					
Blank		N/A			OBSERVATION	IS:		
		N/A						
PUMP#		N/A						
PRIORITY:	Regular	NAME:				SS#	CI	ERT#
TI	ME	FLOW R	ATE (LPM)	VOLUME	Fibers/		Fiber Cond	centration
Start:	Total	Start:	Avg=	Liters=	Fields	Fibers/	Fibers/	*FIBERS/
End:		End:			0 / 100	mm²	Filter	CC:
						< 5.0	< 2,000	()</td
Method	l: NIOSH 7400, A	rules (Issue #	2, 8/15/94)		Limit of Detec	tion: 5	2,000	
Footnote	e: F1-Actual value	of client blank	; the results have b	een blank corre	ected.			

1	Microscope field	area (mm²):	0.00785		Detec	tion Limits of Blank Cor	rected Fiber Count (Fibers/Field): 0.04
	Filter size (mm):	25	Effective Filter Area (mm²):	385	Blank		ank 2: CK085
	Control slide:	93-36	Result (f/mm²)	62.4	Blank	Average: 0 / 1	00
L							
	Sampled by:	Rich Carl	son	Company:	Clayton	Environmental	Consultants
	Received by:	Rich Carl	son	Date:	4/4/97		11 . /
	Microscopist:	Rich Carl	son Date	Analyzed:	4/4/97	Checked by	exeNe

Samples are collected and analyzed according to NIOSH 7400 (Issue 8/15/94) and/or State/OSHA Reference Methods via Phase Contrast Microscope (PCM) by VIOSH 582 trained, PAT or AIHA Registry participating analysts. Flow calibration is performed before and after sampling with calibrated rotameters. We are sponsible only for our own work and cannot verify the accuracy of air sampling data supplied by customers or of sampling not supervised or observed by Layton Enviornmental Consultants professionals.

Intralaboratory Sr: (6.4 - 25.5 fibers/100 fields) 0.43; (25.6 -63.7 fibers/100 fields) 0.38; (63.8 -127.4 fibers/100 fields) 0.29; (>127.4 fibers/100 fields) 0.53 Interlaboratory Sr: 0.40

Clayton Environmental Consultants LABFAX

Log #19529

Client: City of Seattle, D.A.S.

ANALYZED BY Patricia Lukens

ON 4/3/97

cation: Fire Station #39

Job / PO #91031014

SAMPLE LOCATION: O.S. chimney in hose tower SAMPLE #: 1 SOURCE : Lagging Asbestos Containing **HOMOGENEOUS** % other nonfibrous non-asbestos **Asbestos** Asbestos % nonfibrous % components fibers fibers Filler & Binder 78 Chrysotile 12 Paint 10 Description: Gray hard flat material with fibers and paint Note:

Clayton

ASBESTOS AIR SAMPLE DATA

Project # 75.97

Somety HAZCON
4636 E. Marginal Way So. Salm 213

AN AIHA ACCREDITED LABORATORY #414

Log # (77281

Client: C. 4 of Scattle Abatement Firm: NA Location: TRESTATION # 39 Results to: Sampled by: R. C. CANSON Date: 4.4.97 Blank cassettes: Ck-075 Company: C. CANSON Date: 4.4.97 Blank count: Blank	Searce, (200)	WA 98134 763-7364					Numl	per of Samples	4
Cocation: +	Client:	,ty of	Ser	ttle.		batement			
Company: Charlon Every Received by: Received by: Received by: Date: 4-4-77	Location: +	rc stat	110N +	* 39					
Company: Charlon Every Received by: Received by: Received by: Date: 4-4-77	Sampled by:	Rich (Carl son	Date:	4-97	Blank c	assettes:		CK-085
Received by: Date: 4-4-97 Analyzed by: Date: 4-4-97 Microscope field area: OO785 Microscope field area: OO785 Filter size: (circle one) 25mm— or 37mm Control silde: 93 36 result: 24 1/mm CON-191 DATE 4-4-97 Protection Decon Decon Decon Start: 12-0 Avg= End: 12-0 12-0 1166 End: 10-28 CM-2-90 DATE 4-97 PRIORITY NAME: NA FLOW RATE (LPM) Liters= Fiber/ Limit of RESULT Field Detection Decon	1						(AVC	6.)	Blue III
Microscope field area: Date: 4-97 Original (I/mm) D.19		Rich (Carleur	Date:	4-4-97	Blind re (as need)		T 4	
Microscope field area: OO785 recount (t/mm) 7.44 Filter size: (circle one) 25mm- or 37mm Control silde: 93.36 result: 62.4 t/mm² SAMPLE # CN-9 Protection Decon	Analyzed by:			Date:	1-4-97	=			
Filter size: (circle one) 25mm or 37mm Control silde: 93.36 result: 62.4 f/mm SAMPLE # CN - 9 Protection Decon	Microscope field	area:	· C	0785		recount	(f/mm [*])	7.64	
TIME Start: 0727 Total Environment Decon Start: 12.0 Avg Fiber Limit of RESULT Field Detection IN Start: 0727 Total Start: 12.0 Avg Fiber Limit of RESULT Field Detection IN Start: 12.0 Avg Fiber Limit of RESULT Field Detection IN Start: 12.0 Avg Fiber Limit of RESULT Field Detection IN Start: 12.0 Avg Fiber Limit of RESULT Field Detection Decon Start: 12.0 Avg Fiber Limit of RESULT Field Detection Decon Decon Decon Start: 12.0 Avg Fiber Limit of RESULT Field Detection Decon D	Filter size: (circ	le one)	25	OF	37mm				(2.4 1/mm²
TIME Start: 07 55 Total End: 10 28 C13 SAMPLE # CM-27 Protection DATE 4 97 PRIORITY NAME: Start: 12 0 Avg= End: 12 0 12 0 1166 Start: 10 000 Cert# Cond	CN-191 DATE 4-497	Protection	-/	LOCATION	N: LIVING	s Quu relcron	ng S	beight i	200m
Start: 0955 Total Start: 12.0 Avg End: 12.0 12.0 1116 Start: 12.0 Avg End: 12.0 12.0 1116 Start: 12.0 Avg End: 12.0 12.0 1116 Start: 12.0 Avg End: 12.0 12.0 116 Start: 12.0 Avg End: 12.0 12.0 12.0 Start: 12.0 Avg End: 12.0 Start: 12.0 Avg End: 12.0						SS#		Cert#	
Type A COCATION: Hose tower, 3r2 decide Protection Decon Deco	Start: 0955 To End: 1028	otal	Start: 12.	Avg=	1	Field	Detection	TN I	.004
TIME Start: 0959 Total End: 1035 SAMPLE # Type Protection Decon Plump # Environment TIME Start: Total Start: Avg= Fiber/ Limit of RESULT Field Detection IN Field Detection OBSERVATION: SS# Cert# Start: 52.0 Avg= Fiber/ Limit of RESULT Field Detection IN Field Detection SSAMPLE # Type Protection Decon STIME Start: Total FLOW RATE (LPM) SS# Cert# Cert# Time Start: Total Start: Avg= Fiber/ Limit of RESULT Field Detection IN	CM-270 DATE 4-97 PUMP #HF-007	Protection Decon		•		towe		ire deck	
Start: 0357 Total End: 1035 Start: 12.0 Avg= End: 12.0 12.0 12.0 152 SAMPLE # Type LOCATION: Protection Decon Environment Prior					,	SS#		Cert#	_
Type LOCATION: Protection Decon Environment Decon	Start: 0757 To End: 1035	ial S	tart: 12.6	Ave=		Field 1	Detection	IN	002
Decon OBSERVATION: PUMP # Environment OBSERVATION: PRIORITY NAME: SS# Cert# TIME FLOW RATE (LPM) Liters= Fiber/ Limit of RESULT Find: Avg= Field Detection IN	SAMPLE #	i .							
RIORITY NAME: SS# Cert# TIME Start: Total Start Avg= Fiber/ Limit of RESULT Field Detection IN	DATE			OBSERVAT	ION:				
TIME FLOW RATE (LPM) Liters= Fiber/ Limit of RESULT Field Detection IN								•	. [
Start: Total Start Avg Field Detection IN				TE (I DA)					
	_	al Si	tarc		Liters=		Detection	IN	

Sample Types

Personal (BZ) P.Pre-Abelter ime Weighind Average C-Clearance

£-Exercion

M-TEM
D-Deson Entry
H-HEPA Exhaust

P-Pre-Abstrumni
C-Clearanae
X-Aggravive Couranea
I-haide Enclorure
O-Outside Enclorure
A-Area
O-Grove Bag

Controls
Protection:
Difference demand air
Commission flow air

PPAPR P-Fell face, HEPA M-Hull gusk Y-Gloves

Th: distr distr H O R

H-Hardbet O-Coversily R-Rabbar Benns G-Ouggles

Decontamination:

S-Shawer W-Wires Load Out T-Triller Environment:
H-EPA vacuum
N-Negative air
E-Enclosure
M-Minl-Enclosure
O-Outdoors
V-Vacuum Track

HEALTH HAZARD CONTROL SERVICES HAZCON INC. 4636 E. Marginal Way So. Suite 215 Seattle, WA 98134 (206) 763-7364

ASBESTOS BULK SAMPLE DATA

An AIHA #414 and NVLAP #1106 Accredited Laboratory Number of Samples: 3

Project #:

Log #: 11826

Client Name: City of Seattle, D.A.S. Contact: Gary

Job Location: Various

PO#

SAMPLE #: 1	RESULTS:	OTHER FIBERS	%
SOURCE: Floor Tile	Layer Analyzed Separately: Layer 1	Cellulose	3
<u>LAB #:</u> 11826.1 <u>PRIORITY:</u> 2 Hr.			
LOCATION: FS39, Mop sink floor	ASBESTOS TYPE %		
	Chrysotile 8	OTHER MATERIALS	%
MATERIAL DESCRIPTION: LAYERED		Mineral Filler & Binder	89
Orange floor tile with swirls and black asphaltic mastic			
	Note: Insufficient mastic for analysis		

SAMPLE #: 2	RESULTS:	OTHER FIBERS	%
SOURCE: Floor Tile	Layer Analyzed Separately: Layer 1	Cellulose	3
LAB #: 11826.2A PRIORITY: 2 Hr.	No Asbestos Detected		
LOCATION: FS39, Closet floor	ASBESTOS TYPE %		
		OTHER MATERIALS	%
ATERIAL DESCRIPTION: LAYERED		Mineral Filler & Binder	97
Dark gray floor tile with swirls			

SAMPLE #: 2	RESULTS:	OTHER FIBERS	%
SOURCE: Mastic LAB #: 11826.2B PRIORITY: 2 Hr.	Layer Analyzed Separately: Layer 2 No Asbestos Detected	Cellulose	20
LOCATION: FS39, Closet floor	ASBESTOS TYPE %		
		OTHER MATERIALS	%
MATERIAL DESCRIPTION: LAYERED		Filler & Binder	68
Gold pliable mastic		Mineral Filler & Binder Asphalt Filler & Binder	10 2
l i	Note:		

SAMPLED BY: Client

DATE:

COMPANY: City of Seattle, D.A.S.

RECEIVED BY: Leslie Wight ANALYZED BY: Crystal Wright

DATE: 04/20/94 DATE: 04/20/94

SIGNED:

Laboratory Manager

AZCON participates in the NIST/NVLAP Program and is accredited by NVLAP. Accreditation by NVLAP does not indicate endorsement by NVLAP or any ner government agency. All bulk samples are analyzed using Polarized Light Microscopy (PLM) and dispersion staining techniques by trained technicians. Analyses are cross-checked by other in-house technicians and other laboratories for quality assurance and verification. The percent values reported above are based on a visual estimate by volume unless verification by Point Counting is indicated. Test results reported relate only to the samples submitted by the client to HAZCON. Trace amounts of asbestos could possibly be missed by PLM, therefore negative results cannot be guaranteed.



Seattle, WA 98134

(206) 763-7364

ASBESTOS BULK SAMPLE DATA

NVLAP #101106-0

Accredited Laboratory

Page 1 of 1

Log #:

23961

Priority: 2 Hour B

Project #:

77-97062.00

Number of Samples:

Client Name: City of Seattle, E.S.D.

Job Location: Fire Station #39

ContactJoe Zdenek

Job/PO#:9846257

SAMPLE #: (1

LAB#: 23961.1

SOURCE: Mortar

LOCATION: Chimney, west side

MATERIAL DESCRIPTION: HOMOGENEOUS

Tan coarse chunk

RESULTS:

OTHER FIBERS

%

No Asbestos Detected ASBESTOS TYPE **PERCENT**

OTHER MATERIALS

Filler & Binder

100

Note:

SAMPLED BY: Joseph Zdenek

DATE: 5/18/1999

ANALYZED BY: Patricia Lukens

DATE: 5/18/1999

COMPANY: City of Seattle, E.S.D.

RECEIVED BY: Mary Richardson

DATE: 5/18/1999

Laboratory Manager - NVLAP Approved Signatory